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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,504	07/21/2003	Satoshi Seo	12732-160001	4688

26171 7590 11/30/2004

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EXAMINER

GARRETT, DAWN L

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/622,504

Applicant(s)

SEO ET AL.

Examiner

Dawn Garrett

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 1,2,4-13 and 15-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3,14 and 23-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7-21-03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office action is responsive to the amendment dated November 3, 2004 and the response to the election of species requirement dated November 3, 2004. Claims 1, 2, 4-13, and 15-22 are withdrawn as non-elected. Claims 23 and 24 were amended. New claims 25-32 were added. Currently, claims 3, 14, and 23-32 are under consideration. Applicant's election of the species according to formula (3) is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 3 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Janssen et al., J. Chem. Phys. 103(20), Nov. 1995. Janssen et al. discloses conjugated MEH-PPV polymers doped with tetracyanoquinodimethane derivatives (see col. 2, page 8840 and Figure 1 page 8841). Compound 1 shown in Figure 1 reads upon applicant's formula (3). The polymer is deemed to inherently have some redox properties per instant claim 23.

4. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002

do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)). Claims 3, 23, and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Zaidi et al. (WO 03/062305). Zaidi et al. discloses a material comprising polyaniline combined with an electron acceptor TCNQ (which is applicant's elected species) (see Zaidi et al. abstract). Zaidi et al. discloses emeraldine base polyaniline is particularly preferred per instant claim 24 (see page 4, lines 31-32). Because Zaidi et al. discloses the same material as set forth by applicant, the redox properties of claim 23 are deemed to be inherently met by the Zaidi et al. material.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, 14 and 23-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernius et al. (US 2002/0153523) in view of Kono et al. (5,917,693). Bernius et al. teaches organic light emitting diodes on plastic substrates (see title). The Bernius et al. device comprises an optoelectrically active film between two electrodes per the instant anode, cathode and electroluminescence layer (see abstract). Bernius et al. further teaches the anode may be coated with a thin layer of a conducting substance, which may include doped polyaniline (see par. 35). The coating on the anode reads upon the instant "buffer layer" in contact with the anode.

Bernius et al. fails to teach the specific polyaniline dopant "TCNQ". Kono et al. teaches it is known in the art to dope polyaniline with TCNQ to form an electrically conductive polyaniline (see col. 5, lines 31-35). It would have been obvious to one of ordinary skill in the art to have doped the polyaniline taught by Bernius et al. with TCNQ, because Kono et al. teaches polyaniline doped with TCNQ is an electrically conductive material as required by Bernius et al. Because the references disclose the same materials as set forth by applicant, the redox properties of claims 25, 28, and 31 are deemed to be inherent. With regard to claims 26, 29, and 32, emeraldine base of polyaniline is specifically taught by Bernius et al. as a type of polyaniline that is doped (see par. 35).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571)272-1523. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached at (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, reading "Dawn Garrett". The signature is written in a cursive, flowing style.

Dawn Garrett
Primary Examiner
Art Unit 1774

d.g.
November 24, 2004